

I CLAIM:

1. An apparatus comprising:

5 a first device;

a second device;

10 a network including a switching device coupled to said first device and said second device,

15 wherein said network is configured to convey a first packet from said first device to said second device, wherein said switching device is configured to receive said first packet, and wherein said switching device is configured to drop at least part of said first packet, generate a second packet, and convey said second packet to said second device in response to detecting a fault in said network, wherein said second packet includes information about said first packet or about the fault.

- 20 2. The apparatus of claim 1, wherein said second packet includes information from a portion of said first packet.

3. The apparatus of claim 1, wherein said switching device is configured to drop a payload portion of said first packet in response to detecting said fault in said network.

- 25 4. The apparatus of claim 1, wherein said switching device is configured to convey said first packet along a first route through said network in response to not detecting said fault in said network, and wherein said switching device is configured to convey said

second packet along a second route through said network in response to detecting said fault in said network.

5 5. The apparatus of claim 4, wherein said switching device is configured to include route information corresponding to said second route in said second packet.

6. The apparatus of claim 1, wherein said switching device is configured to generate a third packet and convey said third packet to said first device in response to detecting a fault at said second device.

10 7. The apparatus of claim 6, wherein said third packet includes a destination failure indication.

15 8. The apparatus of claim 1, wherein said second device is configured to convey a third packet to said first device in response to receiving said second packet.

20 9. The apparatus of claim 8, wherein said first packet corresponds to a request, and wherein said first device is configured to convey a fourth packet corresponding to said request in response to receiving said third packet.

10. The apparatus of claim 9, wherein said third packet indicates an alternative route through said network for said fourth packet.

25 11. The apparatus of claim 9, wherein said second device is configured to complete an operation corresponding to said request in response to receiving said fourth packet.

12. The apparatus of claim 8, wherein said second device is configured to perform a first operation corresponding to a request indicated by said second packet, and wherein said first packet corresponds to said request.

13. The apparatus of claim 12, wherein said second device is configured to receive a fourth packet subsequent to receiving said second packet, and wherein said second device is configured to perform a second operation corresponding to said fourth packet in response to determining that said second operation is independent of said request.

14. The apparatus of claim 13, wherein said second device is configured to convey a fifth packet corresponding to said fourth packet in response to determining that said second operation is not independent of said request, and wherein said fifth packet comprises a negative acknowledgement.

15. The apparatus of claim 8, wherein said first packet corresponds to a response to a request, wherein said second device is configured to reschedule said request in response to receiving said second packet, and wherein said third packet comprises said request.

16. The apparatus of claim 15, wherein said second packet indicates an alternative route through said network for said third packet.

17. The apparatus of claim 1, wherein said switching device is further configured to drop at least part of said first packet, generate a second packet, and convey said second packet to said second device in response to detecting congestion corresponding to said first packet, wherein said second packet includes information about said first packet.

18. The apparatus of claim 1, wherein said switching device is further configured to drop at least part of said first packet, generate a second packet, and convey said second packet to said second device in response to detecting corruption corresponding to said first packet, wherein said second packet includes information about said first packet.

19. A method comprising:

receiving a first packet from a first device;

detecting a fault in a network coupled to said first device and a second device; and

5

in response to detecting said fault:

dropping at least part of said first packet;

10

generating a second packet, wherein said second packet includes
information about said first packet or the fault; and

conveying said second packet to a second device.

15

20. The method of claim 19, wherein said generating comprises converting a portion
of said first packet into said second packet.

21. The method of claim 19, further comprising dropping a payload portion of said
first packet in response to said detecting a fault.

20

22. The method of claim 19, further comprising conveying a third packet from said
second device to said first device in response to receiving said second packet at said
second device.

25

23. The method of claim 22, further comprising:

rescheduling a request in response to receiving said third packet at said first
device, wherein said first packet corresponds to said request; and

conveying a fourth packet corresponding to said request from said first device to said second device.

24. The method of claim 23, wherein said conveying a fourth packet further comprises conveying said fourth packet on a route through said network indicated by said third packet.

25. The method of claim 21, further comprising performing a first operation corresponding to a request indicated by said second packet at said second device, wherein said first packet corresponds to said request.

26. The method of claim 25, further comprising:

receiving a fourth packet from a third device at said second device subsequent to receiving said second packet; and

performing a second operation corresponding to said fourth packet in response to determining that said second operation is independent of said request.

27. The method of claim 26, further comprising conveying a fifth packet corresponding to said fourth packet from said second device to said third device in response to determining that said second operation is not independent of said request, wherein said fifth packet comprises a negative acknowledgement.

28. The method of claim 19, further comprising rescheduling a request in response to receiving said second packet, wherein said first packet corresponds to a response to said request, and wherein said third packet corresponds to said request.

29. The method of claim 28, further comprising routing said third packet through said network according to said second packet.

30. The method of claim 19, further comprising:

receiving a third packet from a third device;

detecting congestion in said network coupled to said third device and a fourth device; and

in response to detecting said congestion:

dropping at least part of said third packet;

generating a fourth packet, wherein said fourth packet includes information about said third packet; and

conveying said fourth packet to said fourth device.

31. The method of claim 19, further comprising:

receiving a third packet from a third device;

detecting corruption in said network coupled to said third device and a fourth device; and

in response to detecting said corruption:

dropping at least part of said third packet;

generating a fourth packet, wherein said fourth packet includes
information about said third packet; and

5 conveying said fourth packet to said fourth device.

32. An apparatus comprising:

a first port;

10

a second port; and

a switching device coupled to said first port and said second port, wherein said
switching device is configured to receive a first packet, wherein said
switching device is configured to detect a fault in attempting to route said
first packet using said second port, and wherein said switching device is
configured to convey a second packet on said second port in place of said
first packet in response to detecting said fault, wherein said second packet
includes information about said first packet or about the fault.

15

20

33. The device of claim 32, wherein said second packet includes at least a portion of
said first packet.

34. The device of claim 32, wherein said switching device is configured to drop at
least a portion of said first packet.

25